# TECHNICAL REPORT FOR EU TYPE-EXAM CERTIFICATION of Personal Protective Equipment (PPE)

**EU TYPE EXAMINATION Nº:**

**UE-000192/00**

**APPLICATION DATE:** 17/02/2022

**DATE OF ISSUE:** 15/11/2022

**APPLICANT:**

WELDAS EUROPE B.V
BLANKENWEG 18, 4612 RC BERGEN OP ZOOM
NETHERLAND

**PPE TYPE:** GLOVE

**REFERENCE (PPE):** 10-2112

**INDEX:**

# 1. PPE IDENTIFICATION

## 1.1 Description and photograph

Glove in grey leather with beige fabric lining at the cuff and beige fabric lining at the palm and back.

## 1.2 Description of the components

PPE components according to the information supplied by the manufacturer:

- The glove is made of shoulder split cowhide.
- The lining is made of 100% cotton.

## 1.3 Sizes

The size chart supplied by the manufacturer:

| Size | Length of the user's hand (mm) | Perimeter of the user's hand (mm) |
|---|---|---|
| $9^{1/2}$ XL | 204-214 | 254-278 |

## 1.4 Samples given for certification

On the 27/06/2022, fifteen (15) pairs of gloves arrived to the laboratory.
On the 13/10/2022, two (2) pairs of gloves arrived to the laboratory.

## 2. CERTIFICATION SCOPE

- **EN 420:2003+A1:2009** Protective gloves. General requirements and test methods
- **EN ISO 21420:2020** Protective gloves – General requirements and test methods
- **EN 12477:2001/A1:2005** Protective gloves for welders.

  For the protection of the hands of the user against the following risks:

  - Risk of burning due to contact with small splashes of molten metal.
  - Risk of burning due to a short exposure to limited flame.
  - Risk of burning due to convective heat.
  - Risk of burning due to contact heat.
  - Mechanical risks.

## 3. DOCUMENTATION SUBMITTED

Technical documentation, including the next points:

- Complete description of the PPE and of its intended use
- Assessment of the risks against which the PPE is intended to protect
- List of the essential health and safety requirements that are applicable
- Design and manufacturing drawings and schemes of the PPE and of its components and explanations
- Reference of the harmonized standards and/ or other technical specifications
- Reports on the tests carried out to verify the conformity of the PPE
- A description of the means used by the manufacturer during the production (Module C)
  - Manufacturer´s instructions
  - Marking
  - Declaration of conformity

## 4. RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND ANNEX II OF REGULATION (EU) 2016/425 ON PPE

- **EN 420:2003+A1:2009** Protective gloves - General requirements and test methods

| Essential Health and Safety Requirements, according to Annex II of Directive (EU) 89/686/EEC | Clause(s) / sub-clause(s) of the standard EN 420:2003/A1:2009 | Result | |
|---|---|---|---|
| 1.2.1.1 Suitable constituent materials | 4.3 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 1.2.1.3 Maximum permissible user impediment | 5.2 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 1.3.1 Adaptation of PPE to user morphology | 5.1 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 1.4 Manufacturer's instructions and information | 7.3 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 2.2 PPE enclosing the parts of the body to be protected | 5.3 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 2.4 PPE subject to ageing | 4.4 and 7.2.3 | Meet | ☐ |
| | | Not meet | ☐ |
| | | Not applicable | ☒ |
| 2.12 PPE bearing one or more identification markings or indicators directly or indirectly relating to health and safety | 7.2 and Annex B | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |

- **EN ISO 21420:2020** Protective gloves - General requirements and test methods

| Essential Health and Safety Requirements, according to Annex II of Regulation (EU) 2016/425 | Clause(s) / sub-clause(s) of the standard EN ISO 21420:2020 | Result | |
|---|---|---|---|
| 1.2.1.1 Suitable constituent materials | 4.2 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 1.2.1.3 Maximum permissible user impediment | 5.2 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 1.4 Manufacturer's instructions and information | 7.3 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 2.4 PPE subject to ageing | 4.3; 7.2.1.1 f) and 7.2.2 g) | Meet | ☐ |
| | | Not meet | ☐ |
| | | Not applicable | ☒ |
| 2.5 PPE which may be caught up during use | 7.3.7 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 2.6 PPE for use in potentially explosive atmospheres | 4.4 | Meet | ☐ |
| | | Not meet | ☐ |
| | | Not applicable | ☒ |
| 2.12 PPE bearing one or more identification markings or indicators directly or indirectly relating to health and safety | 7.2.1.1 d); 7.2.2 e) and 7.3.5 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |

- **EN 12477:2001/A1:2005** Protective gloves for welders.

| **Essential Health and Safety Requirements, according to Annex II of Directive (EU) 89/686/EEC** | **Clause(s) / sub-clause(s) of the standard EN 12477:2001/A1:2005** | **Result** | |
|---|---|---|---|
| 1.1 Design principles | Clause 3 (reference a EN 420) | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 1.2 Innocuousness of PPE | Clause 3 (reference a EN 420) | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 1.3 Comfort and effectiveness | Clause 3 y 3.1 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 1.4 Manufacturer's instructions and information | Clause 7 (reference EN 420) | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 2.2 PPE enclosing the parts of the body to be protected | Clause 3 (reference a EN 420) | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 2.4 PPE subject to ageing | Clause 3 (reference EN 420) | Meet | ☐ |
| | | Not meet | ☐ |
| | | Not applicable | ☒ |
| 2.12 PPE bearing one or more identification markings or indicators directly or indirectly relating to health and safety | Clause 6 (reference EN 420) | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 3.3 Protection against mechanical injuries | Clause 3 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |
| 3.6 Protection against heat and/or fire | Clause 3 | Meet | ☒ |
| | | Not meet | ☐ |
| | | Not applicable | ☐ |

## 5. DESIGN EVALUATION

- **EN 420:2003+A1:2009** and **EN ISO 21420:2020** Protective gloves - General requirements and test methods

| **Requirement** |
|---|
| After evaluation of the design according to point 4.1 of EN 420:2003+A1:2009 and EN ISO 21420:2020, the PPE is determined to be: |
| Conforming ☒ |
| Not Conforming ☐ |

## 6. SIZING EVALUATION

- **EN 420:2003+A1:2009 and EN ISO 21420:2020** Protective gloves - General requirements and test methods

| **Requirement** |
|---|
| After evaluation of the sizing according to point 5.1 of EN 420:2003+A1:2009 and EN ISO 21420:2020, the PPE is determined to be:<br><br>Conforming ☒<br>Non-Conforming ☐ |

- **EN 12477:2001/A1:2005** Protective gloves for welders.

| **Requirement** |
|---|
| After evaluation of the sizing according to point 3.2 of EN 12477:2001/A1:2005, the PPE is determined to be:<br><br>Conforming ☒<br>Non-Conforming ☐ |

## 7. DEXTERITY

- **EN 420:2003+A1:2009** and **EN ISO 21420:2020** Protective gloves - General requirements and test methods

| **Requirement** |
|---|
| After the evaluation of the dexterity according to point 5.2 of EN 420:2003/A1:2009 and EN ISO 21420:2020, it is determined that the PPE is:<br><br>Level of performance 1 ☒<br>Level of performance 2 ☐<br>Level of performance 3 ☐<br>Level of performance 4 ☐<br>Level of performance 5 ☐ |

## 8. SUMMARY OF RESULTS

| LEGEND RESULTS | |
|---|---|
| M | Meet |
| NM | Not meet |
| NA | Not applicable |
| NT | Not tested |

- **EN 420:2003+A1:2009** Protective gloves - General requirements and test methods

| TEST | APPLIES ON | STANDARD | REQUERIMENTS | *UoM. | REPORT Nº | RESULT |
|---|---|---|---|---|---|---|
| **Innocuousness of protective gloves** Point 4.3.1 | Glove | EN 420:2003+A1:2009, point 4.3.1 | EN 420:2003+A1:2009, point 4.3.1 | NA | NA | M |
| **Determination of pH value** point 4.3.2 | Palm and back beige lining / Cuff beige lining | Others EN ISO 3071 | EN 420:2003+A1:2009, point 4.3.2 The glove material shall have a pH value between 3,5 and 9,5. | ± 0,3 | AR-22-YL-007715-02 | M |
| | Grey leather | Leather EN ISO 4045 | | | | |
| **Cr (VI) Level** point 4.3.3 | Grey leather | EN ISO 17075:2007 | EN 420:2003+A1:2009, point 4.3.3 < 3mg/kg | NA | AR-22-YL-007715-02 | M |
| **Determination of the free protein content**, point 4.3.4 | Rubber | EN 455-3 | EN 420:2003+A1:2009, point 4.3.4 EN 455-3 If the glove contains any substances known to cause allergic reactions, it shall be stated in the product information | NA | NA | NA |
| Cleaning (1) point 4.4 | Glove | - | EN 420:2003+A1:2009, point 4.4 | NA | NA | NA |
| **Sizing** point 5.1 | Glove | EN 420:2003+A1:2009, point 5.1 | EN 420:2003+A1:2009, point 5.1 The glove sizes are standardized according to minimum length. | ±1 mm | Point 6 of this report | M |
| **Dexterity** point 5.2 | Glove | EN 420:2003+A1:2009, point 5.2 | EN 420:2003+A1:2009, Table 4 | NA | Point 7 of this report | Level 1 |
| **Determination of the transmission of water vapor** (1) point 5.3.1 | textile / exterior assembly | EN 420:2003+A1:2009, point 6.3 (IUP 15) | EN 420:2003+A1:2009, point 5.3.1 ≥ 5mg/(cm$^2$·h) | NT | NT | NT |
| **Determination of water vapour absorption** (1) point 5.3.2 | textile / exterior assembly | EN 420:2003+A1:2009, point 6.3 (IUP 15) | EN 420:2003+A1:2009, point 5.3.2 ≥ 8mg/cm$^2$·8h) | NT | NT | NT |
| **Marking** point 7.2 | EN 420:2003+A1:2009, point 7.2 | | | NA | NA | M |
| **Information supplied by the manufacturer** point 7.3 | EN 420:2003+A1:2009, point 7.3 | | | NA | NA | M |

- **EN ISO 21420:2020** Protective gloves. General requirements and test methods

| TEST | APPLIES ON | STANDARD | REQUERIMENTS | *UoM. | REPORT Nº | RESULT |
|---|---|---|---|---|---|---|
| **Determination of content in Chromium (VI)** point 4.2 | Grey leather | ISO 17075-1 or ISO 17075-2 | EN ISO 21420:2020, point 4.2 ≤ 3mg/kg | NA | AR-22-YL-007715-02 | M |
| **Release of nickel** point 4.2 | All metallic materials in contact with the skin | EN 1811+A1:2015 | EN ISO 21420:2020, point 4.2 < 0,5µg/cm² per week | NA | NA | NA |
| **Determination of pH** point 4.2 | Grey leather | Leather ISO 4045 | EN ISO 21420:2020, point 4.2 Between 3,5 and 9,5 | ± 0,3 | AR-22-YL-007715-02 | M |
| | Palm and back beige lining / Cuff beige lining | Others ISO 3071 | | | | |
| **Determination of azo colorants which release carcinogenic amines** point 4.2 | Palm and back beige lining / Cuff beige lining | Textile EN 14362-1 | EN ISO 21420:2020, point 4.2 Shall not be detectable | NA | AR-22-YL-007715-02 | M |
| | Grey leather | Leather ISO 17234-1 | | | | |
| **Dimethylformamide (DMFa)** point 4.2 | PU | EN 16778 | EN ISO 21420:2020, point 4.2 ≤ 1000 mg/kg (0,1% weight/weight) | NA | NA | NA |
| **Determination of Polycyclic aromatic hydrocarbons (PAHs)** point 4.2 | Rubber or plastic materials in contact with the skin | ISO / TS 16190 | EN ISO 21420:2020, point 4.2 and table 1 ≤ 1 mg/kg (0,0001% by mass+ of this component) | NA | NA | NA |
| Cleaning [(1)] point 4.3 | Glove | - | EN ISO 21420:2020, point 4.3 and 7.3.14 | NA | NA | NA |
| Electrostatic properties[(1)] point 4.4 | Exterior fabric / assembly | EN 16350 | EN ISO 21420:2020, point 4.4.1 Additional electrostatic properties determined by the test standards EN 1149-1 or EN 1149-3 | NT | NT | NT |
| **Dexterity** point 5.2 | Glove | EN ISO 21420:2020, point 6.2 | EN ISO 21420:2020, point 5.2 and table 2 | NA | Point 7 of this report | Level 1 |
| **Marking** point 7.2.1.1 (d and f) and 7.2.2 (e and g) | EN ISO 21420:2020, point 7.2 and Annex C | | | NA | NA | M |
| **Information supplied by the manufacturer** point 7.3 | EN ISO 21420:2020, point 7.3 | | | NA | NA | M |

- **EN 12477:2001/A1:2005** Protective gloves for welders.

| TEST | APPLIES ON | STANDARD | REQUERIMENTS | | *UoM. | REPORT Nº | RESULT |
|---|---|---|---|---|---|---|---|
| **General requirements** point 3.1 | - | EN 420:2003 | All the applicable points except the lengths | | NA | NA | M |
| **Sizes** point 3.2 | Glove | Point 3.2, table 1 Point 5.1, Standard EN 420:2003, except the lengths | Point 3.2, table 1 Point 5.1, Standard EN 420:2003, except the lengths | | 1,21 mm | Point 6 of this report | M |
| **Specific requirements** point 3.3 | - | Point 3.3, table 2 | Point 3.3, table 2 | | NA | NA | M |
| **Abrasion resistance** point 3.3 | Fabric / Glove palm assembly | Point 6.1, Standard EN 388 | Type A Level 2 ≥ 500 cycles | Type B Level 1 ≥ 100 cycles | NA | AR-22-YL-007715-02 | Type A |
| **Blade cut resistance** point 3.3 | Fabric / Glove palm assembly | Point 6.2, Standard EN 388 | Type A Level 1 ≥ 1,2 | Type B Level 1 ≥ 1,2 | ± 0,2 | AR-22-YL-007715-02 | Type A |
| **Tear resistance** point 3.3 | Fabric / Glove palm assembly | Point 6.4, Standard EN 388 | Type A Level 2 ≥ 25N | Type B Level 1 ≥ 10N | ± 11 N | AR-22-YL-007715-02 | Type A |
| **Puncture resistance** point 3.3 | Fabric / Glove palm assembly | Point 6.5, Standard EN 388 | Type A Level 2 ≥ 60N | Type B Level 1 ≥ 20N | ± 11 N | AR-22-YL-007715-02 | Type A |
| **Burning behaviour** point 3.3 | Glove | EN ISO 6941 Point 6.3, Standard EN 407(1) | Type A Level 3 $T_{after\ flame}$ ≤ 3s. $T_{after\ glow}$ ≤ 25s If melts, it doesn´t drop. No melting of the glove inner side. Seams don´t come apart | Type B Level 2 $T_{after\ flame}$ ≤ 10s. $T_{after\ glow}$ ≤ 120s If melts, it doesn´t drop. No melting of the glove inner side. Seams don´t come apart | ± 8,8% | AR-22-YL-007715-02 | Type A |
| **Contact heat resistance** point 3.3 | Fabric / Glove palm assembly | EN 702 + Point 6.4, Standard EN 407 | Type A (para $t_t$ ≥ 15s.) Level 1 $T_c$ ≥ 100ºC | Type B (para $t_t$ ≥ 15s.) Level 1 $T_c$ ≥ 100ºC | ± 0,6 s | AR-22-YL-007715-02 | Type A |
| **Convective heat resistance** point 3.3 | Glove palm and back / Glove cuff | EN ISO 9151 + Point 6.5, Standard EN 407 | Type A Level 2 HTI ≥ 7s | Type B ---- | ± 12% | AR-22-YL-007715-02 | Type A |
| **Resistance to small splashes of molten metal** point 3.3 | Glove back / Glove cuff | EN 348 + Point 6.7, Standard EN 407 | Type A Level 3 Drops ≥ 25 | Type B Level 2 Drops ≥ 15 | ± 11% | AR-22-YL-007715-02 | Type A |
| **Dexterity** point 3.3 | Glove | Point 5.2 EN 420:2003 | Type A Diameter ≥ 11 mm | Type B Diameter ≥ 6,5 mm | NA | Point 7 of this report | Type A |
| **Optional requirements Electrical vertical resistance**(1) point 3.4 | Each different part of the glove, including cuff | Point 5.10 and EN 1149-2 | Type A > $10^5$ Ω | Type B > $10^5$ Ω | NT | NT | NT |
| **Marking** point 6 | Point 6 + Point 7.2 of Standard EN 420 | | | | NA | NA | M |
| **Information supplied by the manufacturer** point 7 | Point 7 + Point 7.3, Standard EN 420 | | | | NA | NA | M |

(1) ISO 15025:2016 Modified by standard EN 407:2020

## 9. CONCLUSION

Based on the results obtained in the exams, evaluations and revisions the following can be deduced:

The PPE type **GLOVE** reference **10-2112**, classified as Category **II**, **Type A** Individual Protective Equipment and whose characteristics are stated in point 1 of this report, **COMPLIES** with the essential requirements established by Regulation (EU) 2016/425 of 9 March 2016 through the application of the standards and risks as stated in point 2 of this report.

On 15th of November 2022

Signature of the conformity evaluator:

eurofins

Digitally signed by MELODIE|RUIZ|CABEZUELO
Date: 2022.11.15 18:05:46 +01'00'